

From: [Linnenbrink, Monica](#)
To: [Guiseppi-Elie, Annette](#); [McQueen, Jacqueline](#)
Subject: FW: Tire Crumb FRAP - Response to your email
Date: Wednesday, September 28, 2016 10:20:20 AM

FYI, see below. Email to Nancy Nord was sent from Fred.

From: Hauchman, Fred
Sent: Tuesday, September 27, 2016 6:30 PM
To: nnord@ofwlaw.com
Cc: Burke, Thomas <Burke.Thomas@epa.gov>; Linnenbrink, Monica <Linnenbrink.Monica@epa.gov>
Subject: Tire Crumb FRAP - Response to your email

Dear Ms. Nord,

Thank you for your email to Dr. Tom Burke on August 19, 2016, regarding the U.S. Federal Research Action Plan (FRAP) on Recycled Tire Crumb Used on Playing Fields and Playgrounds. Your email summarized concerns with the recently released Research Protocol document. Specifically, you indicated that the testing protocol does not include mechanisms to control sources of environmental contamination that may be on the tested fields, and one remedy suggested is to study adjacent grass fields. In addition, you suggested that the study needs to include more than air sampling.

As you are aware, the U.S. Environmental Protection Agency (EPA), the Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry (CDC/ATSDR), and Consumer Product Safety Commission (CPSC) launched the FRAP in response to concerns raised by the public. This response is on behalf of both EPA and CDC, the organizations responsible for researching tire crumbs used in synthetic turf fields. These agencies have been charged with gathering scientific evidence to help inform decisions made about the safety of tire crumbs.

The Research Protocol (available online www.epa.gov/tirecrumb) developed to implement the FRAP has undergone extensive review, including peer review and an Institutional Review Board review. A description of how we are collecting information for the research was posted to the Federal Register Notice for public comment, and it went through an Information Collection Request review conducted by the Office of Management and Budget.

The tire crumb rubber characterization study component of the Research Protocol involves the collection of crumb rubber material from tire recycling/crumb rubber manufacturing plants (i.e. "new" material) and from synthetic turf fields in use around the U.S. The samples are being analyzed in laboratories for a wide range of metals, volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs). Laboratory analyses will include dynamic emission chamber measurements for VOCs and SVOCs under different temperature conditions and bioaccessibility measurements for metals and SVOCs. Analyses of these samples are informed by the literature review that identified potential constituents in tire crumb material.

From the analysis of the tire crumbs from tire recycling plants and the literature review, we expect to be able to discern tire crumb-specific constituents from those that might be available from

ambient sources. The tire crumb manufacturing plant samples will serve as our control samples. While some ambient sources may have similar constituents (e.g., PAHs), we believe that this pilot-scale effort will meet the goals of this study to reduce the uncertainty in tire crumb characterization within the scope of the effort.

While there is merit in considering exposures to natural grass fields, there are a number of challenges associated with using soils as a control for ambient source contamination. These include, for example, the lack of information on intrinsic soil chemical constituents; differential adsorptive/absorptive capacity of the soils and subsequent extraction/emissions; and different microbial and physical/chemical degradation, transformation, or transport of chemicals. Additional research to understand these factors would be necessary for the interpretation of the results of field measurements using soil as the control field measurements. Such an undertaking would delay the current effort, and it is not clear that it would be informative in discerning ambient source contributions to synthetic fields. Because of time and resource constraints, we have chosen to focus data collection efforts on synthetic turf fields and their users. We do not think we could conduct the research for synthetic and natural fields and users with enough numbers to support examinations of significant differences.

Thank you again for your interest in our research on this important issue. If you have any further questions, please contact Monica Linnenbrink at Linnenbrink.monica@epa.gov or 919-541-1522.

Fred

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